



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,669	10/06/2000	Rakesh Kumar	13733	3003

28166 7590 10/04/2004

MOSER, PATTERSON & SHERIDAN, LLP
/SARNOFF CORPORATION
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702

EXAMINER

NAKHJAVAN, SHERVIN K

ART UNIT	PAPER NUMBER
----------	--------------

2621

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/680,669	Applicant(s) KUMAR ET AL.	
	Examiner Shervin Nakhjavan	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-27 is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, in the amendment filed 6-25-04, with respect to the rejection(s) of claim(s) 1-23 and 25 under 102(b) and 103(a) have been fully considered and are not persuasive. Applicant's argument with respect to claims 1 and 12, pages 7-8, Bergen et al. not showing newly added feature "the identified common attributes are tracked through the plurality of processed video segments" is disagreed. Bergen clearly teaches the claimed feature in page 16, Lines 6-14, wherein scenes or segments sharing one or more attribute are grouped for later retrieval or access using a texture query which retrieves all the stored scenes or segments having the similar parameter of textural feature which is a way of tracking the textural feature or the common attribute scene to scene or segment to segment. Therefore, Bergen fully anticipates the language of the independent claims 1 and 12. Since applicant's arguments regarding the dependent claims 2-23 are based on Bergen's deficiencies with regards to claims 1 and 12, they are thus themselves stand rejected. Applicant's arguments with respect to claim 25 is persuasive and, therefore the rejection of the claim has been withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 14, 15, 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

Art Unit: 2621

matter which applicant regards as the invention. The phrase "said links" in claims 14 and 17 seem to be referring to a previously cited links, which does not appear in the claim. Therefore these phrases are vague and confusing because it is unclear what feature or element is further limited by this language. Claims 15 and 18 depend from an indefinite base claim and are thus themselves indefinite.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 12, 19, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bergen et al. (WO 98/21688).

Regarding claims 1, 12, 19, 20 and 21, Bergen teaches, limitation of claim 1, apparatus for processing video comprising: a segmenter for segmenting video sequences into a plurality of video segments (Page 13, Lines 17-20, where a segmenter 122 divides the video sequence into segments or scenes); a video processor for processing the video segments of the video sequences and identifying common attributes between video segments (Page 16, Lines 6-12, where the analysis engine 124 of figure 1 as discussed in page 13, lines 17-20, performs steps 330-340 in order to calculate or identify the common attribute or sharing attribute between scenes or segments of the video); and a database for storing processed segments of the video

Art Unit: 2621

sequences (Page 16, Lines 17-21, where scenes or segments are stored in vault 150), where the identified common attributes are tracked through the plurality of processed video segments (Page 16, Lines 6-14, where upon computing the attributes or identifying them, two segments having or sharing a similar textural features are grouped together in a database, a user upon request or query can track common textural features as attributes of the grouped scenes or segments of the video that meet the parameters of the textual query);

Limitation of claim 12, a method of image processing comprising: segmenting a video sequence into a plurality of video clips (Page 13, Lines 17-20, where a segmenter 122 divides the video sequence into scenes which a scene comprise a video clip of frames); storing said video clips in a database with an associated unique identifier (Page 16, Lines 17-21, where the scene or clip attribute data such as address indicia associating the frame and scene attribute information with the actual video frames and scenes are the unique identifiers for each clip) and identifying common attributes between video clips Page 16, Lines 6-10); storing said video clips in said database such that the identified common attributes are tracked through the plurality of processed video segments (Page 16, Lines 6-14, where upon computing the attributes or identifying them, two segments having or sharing a similar textural features are grouped together in a database, a user upon request or query can track common textural features as attributes of the previously grouped scenes or segments based on their textural features, that meet the parameters of the textual query, in other words user

Art Unit: 2621

tracks textural features by retrieving the corresponding scenes from the database); and indexing said stored video (Page 5, Lines 10-18);

Limitation of claims 19, method further comprising: adding ancillary data to said video clips (Page 6, Lines 3-6);

Limitation of claim 20, the ancillary is an annotation (Page 6, lines 6-8);

Limitation of claim 21, the ancillary data is an index to other video clips having similar attributes (Page 6, Lines 8-10).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 10-12, 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Courtney (US 5,969,755).

Courtney teaches limitation of claim 1, apparatus for processing video comprising: a segmenter for segmenting video sequences into a plurality of video segments (Figure 5, item 21 is the segmenter and Column 4, Lines 29-31 teaches objects in a scene are segmented based on motion and Column 4, Lines 43-53 teaches assigning of meta-information to each object for later indexing purposes); a video processor for processing the video segments of the video sequences and identifying common attributes between video segments (Column 4, Lines 54-61, where the path

comprising plurality of frames of the segmented objects are determined along with its intersection or common attributes with other paths of segmented objects by the video processor 13); and a database for storing processed segments of the video sequences, where the identified common attributes are tracked through the plurality of processed video segments (Column 5, Lines 4-11 where database 15 is the storing device for storing all of the processed data output from vision system 13 including the segmented objects and the frames corresponding to their paths and upon a query a user can retrieve or track common attributes or intersections of one path with other stored paths);

Courtney teaches limitation of claim 12, a method of image processing comprising: segmenting a video sequence into a plurality of video clips (Column 4, Lines 54-59, where plurality of video frame data of each segmented object path is the segmented clip); storing said video clips in a database with an associated unique identifier (Column 5, Lines 4-11, where segmented video frames or video clip of the object path output from vision processor 13 of figure 1 along with its meta-information is being its unique identifier as discussed with respect to indexing of Column 4, lines 45-52 is stored in the database 15) and identifying common attributes between video clips (Column 4, lines 54-59, where an intersection or common attribute determination or identification is made between each path of object video clips); storing said video clips in said database such that the identified common attributes are tracked through the plurality of processed video segments (Column 5, Lines 4-11, where motion segmentation data stored is the video clip and an intersection or common attribute of different motion paths or clips can be tracked as discussed with respect to Column 5,

Art Unit: 2621

Lines 12-14, where the selected region is the common attribute of the different paths or clips stored in the database being retrieved or tracked by the computer or user); and indexing said stored video (Column 4, Lines 49-52, where the meta-information is used for indexing);

Courtney teaches limitation of claims 10 and 22, said video processor further comprises: a signal enhancer, coupled to a temporary storage, for enhancing the video sequence (Column 5, Line 58 through Column 6, Line 21, where the low-pass filter in figure 6, is the signal enhancer of the segmentor 21 of figure 5 which is coupled to temporary storage 20 of figure 5);

Courtney teaches limitation of claims 11 and 23, the signal enhancer comprises of noise reduction circuit (Column 6, Lines 13-15);

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-4 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergen et al. in view of Brodersen et al. (US 6,453,459).

Regarding claims 2-4 and 16-18 Bergen teaches number of limitation of claims including authoring of interactive deices or pages including links made by common

Art Unit: 2621

attributes of the video segments or clips of claims 4 and 18 (Page 21, Lines 27-34, where by pointing at the object such as the baseball player all the related stored scenes to the player will be retrieved) however, Bergen fails to specifically teach DVD authoring tool and utilizing the same to link segments or clips of video to each other. Brodersen teaches, limitation of claim 2, apparatus further comprising: a DVD authoring tool (Column 5, Lines 11-14);

Limitation of claim 3, said DVD authoring tool provides interactive links between video segments (Column 13, Lines 32-43, where interactive data is authored in the DVD to link the consumer to other data source);

Limitation of claim 16, the method further comprising: compressing said video clips and said video sequence using high resolution compressor (Column 1, Lines 42-51, where MPEG2 is relatively a high resolution compressing); and a DVD authoring tool for organizing said compressed video clips and video sequence onto a DVD (Column 1, Lines 49-51);

Limitation of claim 17, said links are interactive between compressed video clips and are provided by said DVD authoring tool (Column 9, Lines 25-35, where the video data of the DVD is encoded).

It would have been obvious to an ordinary skilled person in the art to utilize Bodersen's DVD authoring capability because, it would like the CD-Rom storage capability of Bergen's system, be a larger mass data storage means to provide not only storing greater amounts of multimedia and other information, but also for more interactive data retrieval by consumers (Column 1, Lines 13-15).

Art Unit: 2621

10. Claims 5-9 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergen et al. in view of Kenner et al. (US 5,956,716).

Regarding claims 5-9 and 13-15 Bergen teaches number of limitations of the claims including generation of video indexing and browsing using hyper-video having interactive capabilities and links to other information (Page 21, Lines 22-34, where a pointing device is used to interactively link to other information sources) including links made by common attributes of the video segments of claims 7 and 15 (Page 21, Lines 27-34, where by pointing at the object such as the baseball player all the related stored scenes to the player will be retrieved) however, Bergen fails to specifically teach authoring a web page. Kenner teaches Limitation of claims 5 and 13, a web page authoring tool (Column 5, Lines 38-40);

Limitation of claims 6 and 14, said web page authoring tool provides interactive links between video segments (Column 5, Lines 40-52, where links to other video clips are made through web pages);

Limitation of claim 8, apparatus further comprising: a low resolution video compressor and a high resolution video compressor (Column 6, Lines 1-11, where MPEG1 is the low resolution compressor and MPEG2 is the high resolution compressor based on the defined of bandwidth for each scheme i.e. MPEG2 can carry 40 Mbps);

Limitation of claim 9, apparatus further comprising a temporary storage, coupled to said at least one video compressor, for storing said video sequence (Column 8, Lines 51-55).

It would have been obvious to an ordinary skilled person in the art to utilize web page capability of Kenner with Bergen's system because, it would provide for remotely stored video content to be requested and retrieved from a server selected so as to maximize network capacity and minimize transmission delays (Column 1, Lines 12-16).

Allowable Subject Matter

11. The following is an examiner's statement of reasons for allowance: claims 24, 25 and 27 are allowed because, the prior art of record specifically Bergen et al. does not teach enhancing the stored video clips by deinterlacing images in said video clip of claim 25 combined with other features and elements of the claim; claim 27 is allowed because, the prior art of record specifically Irani et al. US 5,768,447 does not teach deinterlacing of a sequence of images as outlined in claim 27 combined with other features and elements of the claim.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2621

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shervin Nakhjavan whose telephone number is (703) 306-5916. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached at (703) 305-4706.

Any response to this action should be mailed to:

Assistant Commissioner for Patents
Washington, DC 20231

Or faxed to:

(703) 872-9306 for *formal* communications, please mark "EXPEDITED
PROCEDURE"

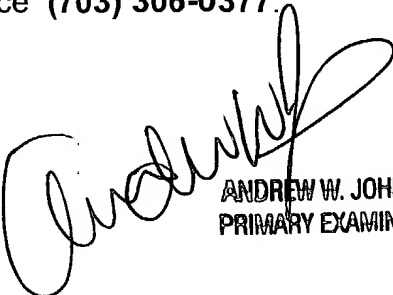
or:

for *informal* or *draft* communications; please label "PROPOSED" or
"DRAFT".

Hand delivered responses should be brought to Crystal Park 2, 2121 Crystal drive, Arlington, VA, sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Tech center 2700 customer service office (703) 306-0377.

Shervin Nakhjavan
Patent Examiner
Group Art Unit 2621
September 28, 2004.



ANDREW W. JOHNS
PRIMARY EXAMINER